

C L A I M S

1. A pressure controlling apparatus for controlling a pressure in a container capable of storing a molten metal and supplying the molten metal to an outside using a pressure difference, comprising:

a supplying portion for supplying a compressed gas to be supplied to the container;

a flow passage for supplying the compressed gas from the supplying portion to the container; and

a first switching valve, being inserted into the passage, capable of manually switching a first mode that enables the passage of the gas between the supplying portion side and the container side and a second mode that enables the passage of the gas between the container side and the outside.

2. The pressure controlling apparatus as set forth in claim 1,

wherein the switching between the first mode and the second mode is performed exclusively with one same operation.

3. The pressure controlling apparatus as set forth in claim 1, further comprising:

at least one of a leak valve and a relief valve connected to the flow passage.

4. The pressure controlling apparatus as set forth in claim 3,

wherein a part of the flow passage is an air tube having a connecting portion connected to the container, and

5 wherein a filter is inserted between the first switching valve and the connecting portion.

5. The pressure controlling apparatus as set forth in claim 1, further comprising:

10 an exhausting portion for exhausting a gas from the container;

a second switching valve for switching a pressure applying mode for applying a pressure to the container and an exhausting mode for exhausting the gas from the container;

15 and

wherein the flow passage includes:

a first path for connecting the supplying portion and the second switching valve,

20 a second path for connecting the exhausting portion and the second switching valve,

a third path for connecting the second switching valve through to the container side, and

wherein the first switching valve is inserted into the third path.

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6. The pressure controlling apparatus as set forth in claim 1, further comprising:

a compressor, driven by an electricity generated by
a generator, the generator being driven by an engine for
driving a transporting vehicle for transporting the
container with the pressure controlling apparatus being
5 mounted thereon; and

a tank for storing the compressed gas compressed by
the compressor and supplied from the supplying portion.

7. The pressure controlling apparatus as set forth in
10 claim 1, further comprising:

a compressor driven by an electricity of a battery
for supplying electricity to a motor, the motor driving the
transporting vehicle for transporting the container with
the pressure controlling apparatus being mounted thereon;
15 and

a tank for storing the compressed gas being compressed
by the compressor and being supplied from the supplying
portion.

20 8. A transporting vehicle for transporting a container
capable of storing a molten metal and supplying the molten
metal to an outside using a pressure difference, comprising:

an engine for driving the vehicle;

a generator driven by the engine;

25 a compressor driven by an electricity generated by
the generator;

a tank for storing a compressed gas compressed by the

compressor; and

a pressure controlling portion, having an interface
portion detachably disposed against the container, for
applying a pressure in the container via the interface
portion.

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9. The transporting vehicle as set forth in claim 8,
further comprising:

a filter disposed on a line connecting the compressor
and the tank.

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10. The transporting vehicle as set forth in claim 8,
wherein the container has a hatch capable of being
opened and closed on a top surface of the container and the
interface portion is detachably disposed against a
connecting portion on the hatch provided for controlling
the pressure in the container.

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11. A transporting vehicle for transporting a container
capable of storing a molten metal and supplying the molten
metal to an outside using a pressure difference, comprising:

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a motor for driving the vehicle;

a battery for supplying an electricity to the motor;

a compressor driven by the electricity in the battery;

a tank for storing a compressed gas compressed by the
compressor; and

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a pressure controlling portion, having an interface

portion detachably disposed against the container, for applying a pressure in the container via the interface portion.

- 5 12. A transporting vehicle for transporting a container capable of storing a molten metal and supplying the molten metal to an outside using a pressure difference, comprising:
- a compressor;
- a tank for storing a compressed gas compressed by the
- 10 compressor;
- an air tube, having an interface portion detachably disposed against the container on one end, and being connected through to the tank;
- a line becoming a flow passage of a gas flowing between
- 15 the tank and the air tube;
- a first leak valve connected to the line; and
- a filter disposed on the line and between the first leak valve and the interface portion.

- 20 13. The transporting vehicle as set forth in claim 12, further comprising:
- a second leak valve disposed between the first leak valve and the interface portion and connected to the line,
- wherein the filter is disposed between the second leak
- 25 valve and the interface portion and on the line.

14. A transporting vehicle for transporting a container

capable of storing a molten metal and supplying the molten metal to an outside using a pressure difference, comprising:

a compressor;

5 a tank for storing a compressed gas compressed by the compressor;

a vacuum pump;

an air tube, having an interface portion detachably disposed against the container on one end;

a switching portion;

10 a first line becoming a flow passage of a gas flowing between the tank and the switching portion;

a second line becoming a flow passage of a gas flowing between the vacuum pump and the switching portion; and

15 a third line becoming a flow passage of a gas flowing between the switching portion and the air tube,

wherein the switching portion switches a connection between the first line and the third line, and the connection between the second line and the third line.

20 15. The transporting vehicle as set forth in claim 14, further comprising:

a first leak valve disposed between the tank and the interface portion and on one of the first line and the third line; and

25 a filter disposed between the first leak valve and the interface portion and on one of the first line and the third line.

16. The transporting vehicle as set forth in claim 15,
further comprising:

5 a second leak valve disposed between the switching
portion and one end of the air tube and connected to the
third line,

wherein the filter is disposed between the second leak
valve and the air tube on the third line.

10 17. A pressure difference controlling unit being mounted
on a transporting vehicle, holding a container capable of
storing a molten metal and supplying the molten metal to
an outside using a pressure difference, comprising:

a compressor;

15 a tank for storing a compressed gas compressed by the
compressor; and

a pressure controlling portion, having an interface
portion detachably disposed against the container, for
applying a pressure in the container via the interface
20 portion with the compressed gas.